

ORIGINAL PAPER

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Pathways to care and psychological problems of general practice patients in a “gate keeper” and an “open access” health care system

A comparison of Germany and the Netherlands

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Abstract *Background* The comparison of different health care systems is one way to give empirical evidence to health care reform and policy. The differences between health care systems in which general practitioners serve as gate keepers in comparison to systems in which patients are free to contact every physician and specialist they like are a question of high interest. *Method* This study compares the Netherlands and Germany, two countries with very similar political, social, and health system structures, but different types of access to the health care system. While Germany offers unconstrained access to specialist ambulatory care, the Netherlands restricts health care utilization by giving primary care a ‘gate keeper’ function not allowing patients direct access to specialist care. Data from the WHO international collaborative study on psychological problems in general health care (Üstün and Sartorius 1995) were analysed with respect to pathways to care, treatment, and health status. In an initial cross-sectional assessment, in 3-month and 12-month follow-ups, contacts to physicians or hospital admission have also been monitored. *Results* There were only marginal differences between the Dutch and the German sample in the so-

ciodemographic characteristics as well as in the diagnostic status with respect to mental disorders. In the Netherlands, 95.5%, and in Germany, 68.8% of the patients presented their ‘reason for visit’ for the first time to any physician at this index contact with a general practitioner. During the following 3 months, 24% of the Dutch patients, but 60.2% of the German patients, additionally contacted other physicians ($P < 0.001$). At 12 months, this rate was 62.9% vs. 78.6% ($P < 0.001$). During the 12-month follow-up period, there were 15.7% hospital admissions in Germany vs. 25.4% in the Netherlands ($P < 0.005$). *Conclusions* Family physicians in a gate keeper system reduce the number of contacts to other physicians and the intensity of treatment, while at the same time the rate of hospital admissions is increased.

Keywords cost containment – delivery of health care – doctor-patient encounter – free choice of doctor – gate keeper effects – general practice – health care expenditure – health care utilization – health economics – health policy – primary care

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Introduction

The costs for public health care have continuously been growing in the last decades because of the aging of the population, with an increased need for health care, because of the availability of new treatments and technologies, and because of growing public expectations (Hurst 1985; Linden et al. 1999; Helmchen and Linden 2000). As a consequence, many countries are using a series of measures to try to control costs and to economize their health systems (WHO 1998; Carr-Hill 1994).

One way to restrain health care costs is to restrict health care utilization by giving primary health care a ‘gate keeper’ position not allowing patients direct access to specialist care or other physicians. At present, this is, for example, one of the options in the discussion on health care cost containment in Germany, but there is a

need for empirical data which demonstrate whether the expectations of a reduction in the utilization of care by a gate keeper system are fulfilled in reality. In order to study whether there are differences in pathways to care and health care utilization in a system where general practitioners work as gate keepers as compared to an open access system where every patient can directly contact every physician or specialist, countries are needed for comparison with similar socioeconomic, political, and cultural backgrounds. However, such comparisons raise several methodological problems (Alber and Bernardi-Schenkluhn 1992). Institutional structures must be analysed and described sufficiently. Data collection has to be made with the same methods which at the same time must respect the complexity of relations between system structures, delivery of services, utilization processes, and outcome.

Germany and the Netherlands are an almost ideal pair for such a study. Both countries are very similar in social and political terms. There are virtually no differences in sex ratio (1.08 female/male in both countries in 1997), age structure of the population (age 65+ to age <5 ratio in 1997: 3.2 in Germany vs. 2.2 in the Netherlands), life expectancy at birth (77 years for both sexes in Germany vs. 78 years in the Netherlands in 1997), living conditions and living standards [Gross National Product (GNP) per capita in 1995: US\$ 27,510 in Germany vs. US\$ 24,000 in the Netherlands], or environmental exposure (WHO 1992, 1995, 1998). In Germany, as well as in the Netherlands, the proportion of the GNP spent on health care has remained fairly constant at about 8% over the years in both countries (Kassenärztliche Bundesvereinigung 1992; d'Ancona and Simons 1993; Ministerie van Welzijn, Volksgezondheid en Cultuur 1994). According to OECD data, this figure is on the average level of western European countries [Organisation for Economic Cooperation and Development (OECD) 1993]. Both health care systems are characterized by a combination of public and private health insurance (Elsinga and Rutten 1997). In the Netherlands, about 60% of the population are covered by public and 38% by private insurance. In Germany, 88.5% of the population are insured publicly, and 9% privately (Federal Statistical Office 1998). The percentage uninsured is extremely small in both countries. In Germany, physicians are paid by a combination of a flat rate and a 'fee for service' system. In the Netherlands, the general practitioner receives a flat annual capitation fee for publicly insured patients, while he can charge the privately insured for each medical service rendered ('fee for service') (Bongers et al. 1997).

With all these similarities, both countries differ in respect of the role of family physicians in the system. Almost 100% of the Dutch population have their family physician, who is always a general practitioner with a 2-year special education. This general practitioner has a gate keeper function which means that every patient has to contact this physician first when medical help is needed. In the majority of cases (90–95%), treatment is

then directly provided by this physician (Simons 1993). A patient is not allowed to consult a specialist directly and a referral to a specialist will only be made when there are special diagnostic or therapeutic problems. Before contacting a specialist, publicly insured patients have to obtain a referral card from the general practitioner, which has a limited period of validity. Privately insured patients often need a referral card too, but for them the card has unlimited validity. The choice of what kind of specialist the patient sees is primarily up to the family physician. After a referral has been made, the general practitioner still remains the central professional in the management and coordination of the patient's treatment.

The German health care system concedes a free doctor choice. The first physician who is consulted by the patient can be either a general practitioner or a specialist. It is up to the patient to decide what kind of physician is the right one for solving a medical problem in the best possible way. In the German open access system, the patient is even permitted to see more than one physician in order to achieve the optimal treatment of one and the same health problem.

In order to study similarities or differences in pathways to care and health care utilization in the Netherlands and in Germany, we had the opportunity to analyse data from the WHO international collaborative study on psychological problems in general health care (Üstün and Sartorius 1995). In this study, patients in primary care had been thoroughly assessed with respect to their health status in general and mental disorders in particular. In an initial cross-sectional assessment and in 3-month and 12-month follow-ups, contacts to physicians were also monitored, allowing comparison of health care utilization in both countries. The pathways to ambulatory care were studied in order to analyse differences in the frequency of utilization of primary vs. specialist care. Additionally, differences in the therapeutic approaches (pharmacotherapy, counselling, and psychological support) between both countries and the effects of utilization patterns on hospital admission rates were assessed.

On the basis of these data, we were able to ask whether in a gate keeper system, as established in the Netherlands, there is a different frequency and pattern of consulting physicians as compared to an open access system like in Germany. By analysing patient based utilization data, this study aims at contributing substantially to the ongoing discussion about the adequate allocation of providers in different health care systems and about the effects of gate keeper models on health care utilization.

Subjects and methods

The WHO study on Psychological Problems in General Health Care was conducted in 15 research centres located in 14 European and non-European countries (Sartorius et al. 1993; Üstün and Sartorius 1995;

Linden et al. 1996). Each participating centre had access to a general health care setting 'prototypically representative' of the primary health care services in their country. Representativeness was reviewed using available national data, the reports of the investigators that provided a full description of the setting in accordance with standard guidelines, and pilot test data. Following the selection of suitable facilities, the service areas and population were delineated: a standard questionnaire was completed by the investigators for each centre describing the setting, the population, the providers, the kinds of services provided, health care insurance arrangements, the availability and use of mental health personnel and treatments, and related information (Üstün and Sartorius 1995).

This report concentrates on two subgroups of the total multinational sample that covered 26,422 patients, i.e. the German and the Dutch data. In the Netherlands, research was conducted in a single centre at Groningen, collaborating with 11 family physicians. In Germany, there were two centres in Mainz and in Berlin, collaborating with general practitioners and internists, who both work as primary care physicians. There were 35 physicians in Berlin and 20 in Mainz. The collaborating physicians can be seen as prototypical for general practitioners in the two health care systems, even if the selected physicians did not, in the strict sense, constitute a random sample of all practitioners.

In the first step, all persons entering the practice at randomly selected days were asked to participate in the study. The study protocol called for the screening of 1,500 patients per centre with the 12-item short form of the General Health Questionnaire, or 'GHQ' (Goldberg and Williams 1988). The GHQ-12 is a psychological screening scale that asks subjects to rate on a four-point scale the severity of symptoms of psychological distress over the past few weeks. Typical items included 'lost much sleep over worry', 'felt constantly under strain', 'been feeling unhappy and depressed', 'been able to face up to your problems', and 'been thinking of yourself as a worthless person'. The GHQ was selected because it had been widely used in primary care research and its measurement properties had been studied in diverse cultural settings. The 12-item version was selected because a brief screening instrument was required and prior research did not suggest that shortening psychological distress screening questionnaires impairs sensitivity or specificity (Üstün and Sartorius 1995).

On the basis of this screening examination, patients were sampled for a second interview according to pre-defined criteria: 10% of the patients with a low GHQ-score of '0' or '1', 35% with a medium score between '2' and '4', and 100% with a high score of '5' were chosen for further investigation. These patients were asked to participate in the second-stage examination which was an extensive assessment including the complete General Health Questionnaire (Goldberg and Williams 1988), a physician report form, the Composite International Diagnostic Interview (CIDI) (Robins et al. 1988; WHO 1990, 1991), the Social Disability Schedule (Wiersma et al. 1988, 1990), the Brief Disability Questionnaire (BDQ), the Overall Health Self-Rating Form, the Health Care Use Form, and the Medication Use Form. The BDQ was composed of six self-report disability items taken from the Medical Outcomes Survey Short Form 36, or SF-36 (Stewart et al. 1988). The battery of questions about the patient's pathway to the current care provider was adapted from a series of items used to study pathways to mental health care in a prior WHO study (Gater et al. 1991). Second-stage examinations were completed with about 400 patients per centre. Based on information obtained in the second-stage examination, patients were then sampled for follow-up 3 months and 1 year after the initial interview.

As to the pathways to care and health care utilization, patient outcomes were measured in terms of the frequency of contacts to family doctors compared to the frequency of specialist contacts at first consultation, and in the 3-month and 12-month follow-ups. Additional measurement of outcomes was carried out by analysing hospital admission rates related to psychological problems, as well as the type of treatment (pharmacotherapy, counselling, and psychological support) and overall prescription rates.

There were 800 patients in Germany and 340 in the Netherlands included in the initial comprehensive assessment. Of the patients, 58.4% were female (59.7% in the Netherlands, 57.9% in Germany), 41.6% were male (40.3% in the Netherlands, 42.1% in Germany), 56.8% were between 15 and 40 years old (56.5% in the Netherlands,

57% in Germany), and 43.2% were up to 65 years old (43.5% in the Netherlands, 43% in Germany). At the 3-month follow-up, 223 patients (65.6% of the patients who completed the second-stage examination) were reinterviewed in the Netherlands and 564 (70.5%) in Germany. In the 12-month follow-up, there were 557 (69.6%) patients in Germany and 228 (67.1%) patients in the Netherlands. Analyses regarding age, sex, and GHQ score did not reveal any difference for non-responders in the follow-up; however, a response rate of approximately two out of three patients has to be considered when explaining the findings.

Results

As Table 1 and Table 2 show, there were only marginal differences between the Dutch and the German sample in the sociodemographic characteristics as well as in the diagnostic status in respect of mental disorders. About every fifth patient of family physicians in both countries was suffering from a current ICD10 psychiatric diagnosis. Also there were similar outcomes in patients' self-rating of their overall health status, with 28.1% of the Dutch and 29.6% of the German patients judging their health as 'fair' or 'poor'.

Physicians and interviewers gave their global impression on whether the patients' complaints were more likely due to a psychological or a somatic problem.

Table 1 Comparison of patients from Germany and the Netherlands regarding sociodemographic characteristics (patients in per cent)

	Netherlands (n = 340)	Germany (n = 800)
Sex		
Male	40.3	42.1
Female	59.7	57.9
Age (years)		
15–24	19.3	15.8
25–44	48.2	51.5
45–65	32.5	32.8
Years of schooling		
None	0.0	0.0
1–4	0.3	0.0
5–8	19.7	17.4
9–12	33.8	56.8
13+	32.6	25.4
Still at school	13.6	0.1
Missing	0.0	0.4
Current marital status		
Married	63.2	53.7
Never married	30.9	30.6
Widowed	1.1	2.1
Separated/divorced	4.8	13.6
Missing	0.0	0.2
Employment status		
Not employed	14.0	13.0
Employed	46.4	71.0
Keeps house	25.9	8.5
Student	13.7	7.6
Unknown	0.0	0.0

Table 2 Comparison of patients from Germany and the Netherlands regarding the diagnostic status in respect of mental disorders based on the CIDI-interview and calculated according to algorithms of ICD-10 for 1-month prevalence at data collection phase t_0 (patients in per cent)

	Netherlands (n = 340)	Germany (n = 800)
Well	35.3	28.0
Symptomatic	29.7	35.6
Subthreshold	6.2	8.5
ICD-10 diagnosis	23.8	20.9
Alcohol	5.0	7.0

About 30–40% of the Dutch and the German patients were seen as having some kind of psychological problem.

Recognition of mental disorders in general health care may be influenced by a number of factors; for example, the training and the experience of the physicians, their conceptualization of psychological problems, their working conditions, and the structure of the doctor-patient relationship. The concordance of physicians' diagnosis with the research diagnosis for patients with definite psychological disorders ranged from 51.2 to 75.6%. It can be presumed that the potentially biasing factors did not play an important role in our comparison between the Netherlands and Germany, as there was limited variation in the physicians' recognition of mental disorders between the two countries (see Table 3).

With reference to the reasons for visit, independent of a somatic or a psychological problem, patients were asked about their 'pathways to care' if they did not regularly consult their physician because of a chronic illness, and if their last previous contact with the physician had been more than 12 weeks before. In this way, information was obtained from 386 patients in Germany and 179 in the Netherlands. The following results are given as percentages referring to these numbers of patients. Group comparisons are performed using Fisher's exact *t*-test.

For almost every Dutch patient (95.5%), the first health care provider to contact was a general practitioner. In Germany, this rate was much lower (68.8%). Instead, the frequency of consulting a specialist first was

Table 3 Comparison of patients from Germany and the Netherlands regarding the recognition as a psychological case of current ICD-10 disorders by treating physicians (recognized cases in per cent)

	Netherlands (n = 340)	Germany (n = 800)
Current depression (F32/33)	59.6	56.2
Generalized anxiety disorder (F41.1)	58.7	60.2
Somatization disorder (F45)	75.2	75.6
Any ICD-10 diagnosis*	51.2	58.0

* Any ICD-10 diagnosis: in addition to the above, dysthymia (F34), agoraphobia (F40.4), panic (F41.0), hypochondriasis (F45.2), and neurasthenia (F48.0)

18.8% in Germany, whereas in the Netherlands none of the patients consulted a specialist in the function of a first health care provider. Subsequent referral rates to specialists were similar in the Netherlands and in Germany (18.4% vs. 16.2%).

Data about the treatment of the psychological problem at index consultation were collected from the physicians on a report form and from the patients by means of the Health Care Use Form and the Medication Use Form. The proportion of those who, according to the information obtained from the patients, did not receive any treatment at all is almost twice as high in the Netherlands as in Germany (15.6% vs. 7.1%). According to physicians' reports, the frequency of counselling and discussion of problems is 10.8% in the Netherlands and 23.9% in Germany ($P < 0.01$).

Data on pharmaceutical treatment were collected from the patients by means of the Medication Use Form. Antidepressants (4.6% of the patients in the Netherlands vs. 1.4% of the patients in Germany; $P < 0.01$), sedatives (7% of the patients in the Netherlands vs. 2.4% of the patients in Germany; $P < 0.01$), and hypnotics (3.7% of the patients in the Netherlands vs. 0.9% of the patients in Germany; $P = 0.02$) were more often prescribed in the Netherlands. Prescription of analgesics (14.3% in Germany vs. 10.8% in the Netherlands; $P < 0.01$), major tranquillizers (5% in Germany vs. 3% in the Netherlands; $P < 0.01$), tonics (1% in Germany vs. 0% in the Netherlands; $P = 0.04$), and herbal drugs (7.8% in Germany vs. 0.1% in the Netherlands; $P < 0.01$) occurred more frequently in Germany.

Regarding the overall prescription rates for psychological problems, medication is given twice as often in Germany as in the Netherlands (16% vs. 7%), together with a higher frequency of multimедication in the German sample.

According to the 3-month follow-up (Fig. 1), 21.6% of the Dutch and 26.4% of the German patients had not seen the family physician in between; 37.7% of the Dutch patients and 22.9% of the German patients had

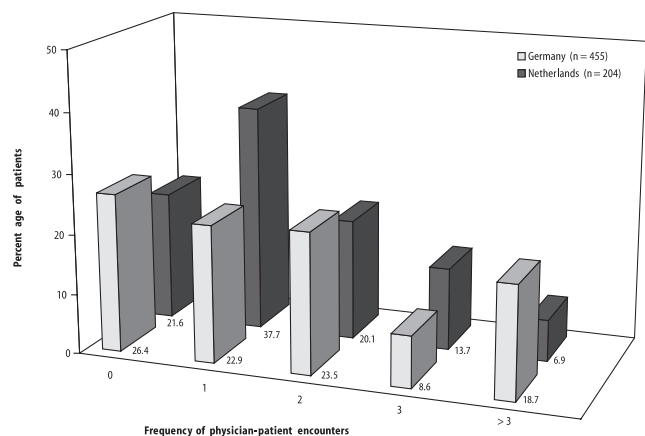


Fig. 1 Comparison of patients from Germany and The Netherlands regarding the frequency of consulting the same physician as at the onset of the study (3-month follow-up)

seen him or her once and, in the Netherlands, 6.9%, and in Germany, 19.7% of the patients had seen their family physician even more than three times ($P < 0.001$).

The average total number of contacts between the family physicians and those patients who participated at the 3-month follow-up were 1.53 per patient in the Netherlands and 2.66 per patient in Germany. During the 3-month period, the number of contacts with any other physician was 0.44 per patient in the Netherlands, whereas in Germany it came up to 1.56 per patient.

As Fig. 2 shows, 76% of the Dutch patients did not see any other physician in this 3-month period, while in Germany this was true for only 39.8% ($P < 0.001$). There were, however, more often hospital admissions in the Netherlands (14.2%) than in Germany (9.2%). Patients were also asked if they still took any medication for the treatment of their main problem. In the Netherlands this question was answered positively by about twice as many patients as in Germany (7.3% vs. 3.5%).

During the 12-month period, the total number of contacts with the family physician came up to an average of 3.14 per patient in the Netherlands compared to 4.26 in Germany. Fig. 3 shows the frequency of consulting the same physician as before at the 12-month follow-up. In all, 22.1% of the German patients and 19.9% of the Dutch patients did not see their initial family physician during the 1-year period. Fig. 4 shows the percentage of patients who consulted other physicians one or more times within the 12-month period. In Germany, this percentage is far higher than in the Netherlands (78.6% vs. 62.9%; $P < 0.001$). Correspondingly, the average total number of contacts between the enrolled patients and any other physicians in Germany was 4.56 per patient compared to 3.49 in the Netherlands.

Also, at the 12-month follow-up, hospital admissions were reported less often in Germany (15.7%) than in the Netherlands (25.4%; $P < 0.005$).

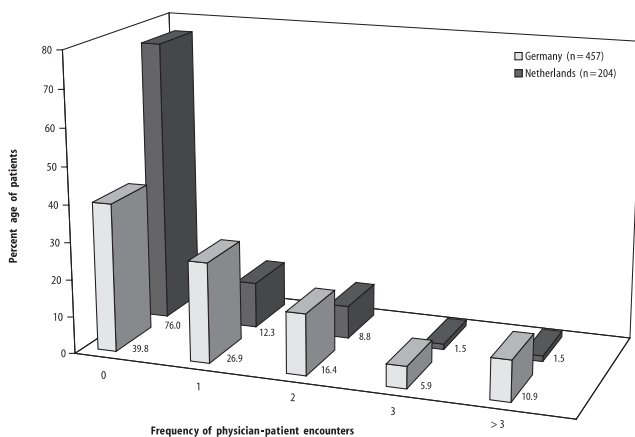


Fig. 2 Comparison of patients from Germany and The Netherlands regarding the frequency of consulting any other physician (3-month follow-up)

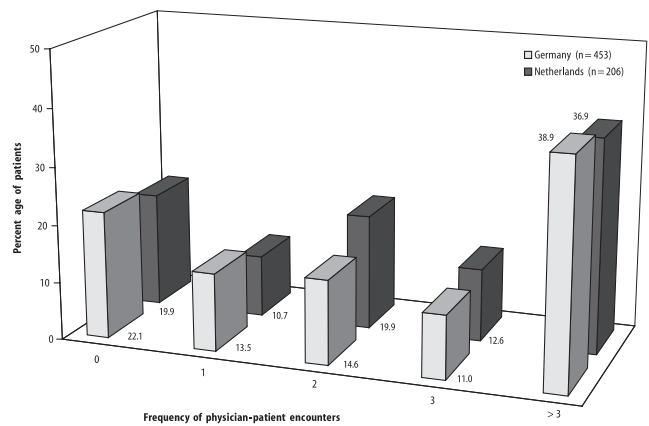


Fig. 3 Comparison of patients from Germany and The Netherlands regarding the frequency of consulting the same physician as at the onset of the study (12-month follow-up)

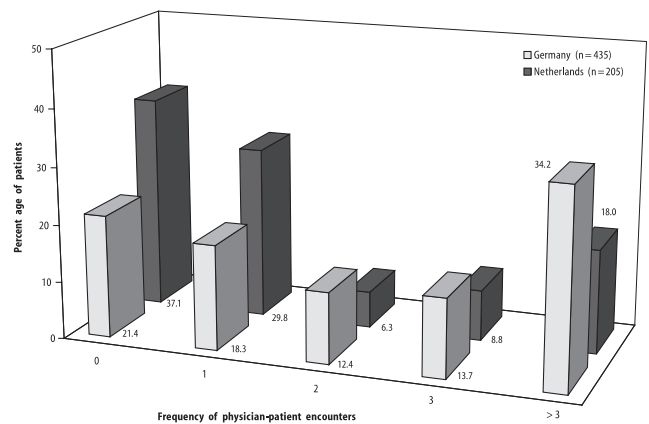


Fig. 3 Comparison of patients from Germany and The Netherlands regarding the frequency of consulting any other physician (12-month follow-up)

Discussion

This study is unique as it compares health care utilization in two countries with very similar political, social, and health system structures by thoroughly investigating individual patients who contact a primary care physician for a new health problem. The assessment included a detailed 'pathways to care' examination in respect of the present 'reason for visit'. Patients were reinterviewed after 3 and 12 months. All assessments were made according to the same design with identical instruments (in equivalent language versions) and special attention was paid to ensuring the comparability of data. This study, therefore, provides detailed data on health care utilization of primary care patients in both countries. There is, to our knowledge no other comparable study that uses patient-related datasets collected for the particular purpose of this kind of analysis.

This approach has the advantage that the patient's health care utilization can be analysed prospectively based on authentic diagnoses obtained in the medical assessment, whereas claims data analysis does not pro-

vide reliable information about diagnostic classification. The connection of claims data information with specific illness states has to be decided on the basis of circumstantial evidence such as drug prescriptions, sick leave information, or hospital stays, and it, therefore, weakens the conclusions that can be drawn.

The most important result of our study is that in the Netherlands 95.5% and in Germany only 68.8% of the investigated patients presented their 'reason for visit' for the first time to any physician at this first contact with a general practitioner. During the following 3 months, 24% of the Dutch patients, but 60.2% of the German patients, additionally contacted other physicians ($P < 0.001$). At 12 months, this rate was 62.9% vs. 78.6% ($P < 0.001$). During the 12-month follow-up period, there were 15.7% hospital admissions in Germany vs. 25.4% in the Netherlands ($P < 0.005$).

A limitation of the present study is that the study sample had already contacted a primary care physician when the investigation started. Regarding the German health care system, where direct access to specialist care is possible, it, therefore, cannot answer the question what percentage only sees a specialist instead of a primary care physician at the beginning. It can, however, answer to what extent general practitioners provide full care for their patients, to what extent they need the help of a specialist, and to what extent patients seek the help of several physicians at the same time.

With regard to the type of care there were indications that in Germany physicians provided more treatment, whether in respect of the overall prescription rate, the rate of counselling and psychological support, or the number of visits to the surgery in the initial 3-month treatment phase. On the other hand, the frequency of contacts with the primary care physician in Germany seems to be less stable over time.

Our data support Hurley et al. (1991a, b) who claim that there is a greater personal continuity of care in the Netherlands. These findings are also in line with data on expenditures for the health care system in both countries. Even if there are many other factors which contribute to costs, it is of interest to see that in 1990, for example, a German patient spent an average of US\$ 325 on medicine, compared to US\$ 135 spent by a Dutch patient (Ministerie van Welzijn, Volksgezondheid en Cultuur 1994). In 1997, the Netherlands spent 8.5% of the Gross National Product (GNP) on health care, compared with 10.7% for Germany, and 9.6% for France.

A recent study by Dutch economists (Van de Ven and van Praag 2000) suggests that the amount of money spent on health care is related to the different number of physicians per 1,000 patients. In the Netherlands, the number of general practitioners (GPs) and specialists is significantly lower than in other European countries. Germany, Belgium, and France have one GP per 1,000 patients compared with the Netherlands, which has one GP per 2,000 patients. There are similarly low numbers of medical specialists: the Netherlands has 0.9 specialists per 1,000 patients, whereas other European coun-

tries have 1.5–2.2 specialists per 1,000 patients. The study of Van de Ven and van Praag, which also compares data on expenses, waiting lists and average life expectancy for 1997 from the OECD's member states concludes that health care quality in the Netherlands is inferior to that in other European countries.

In the literature, there are presumptions that improvements in quality and allocation of ambulatory care could reduce the number of hospitalizations associated with "ambulatory care sensitive hospital admissions" such as asthma, hypertension, congestive heart failure, chronic obstructive pulmonary disease, or diabetes (Haklai et al. 2000). Better outpatient care may prevent aggravation and exacerbation of disease and reduce the need for hospital admissions and readmissions. This might ultimately produce a shift within direct costs, with subsequent reductions in indirect costs (Barnes et al. 1996).

Up to now, no conclusive evidence has been found to favour one of the two different forms of allocation of treatment, general health care as provided by the family physician or the use of specialists, although limited evidence would suggest that specialist care is better than general care. Ettner et al. (1999) examined differences between the general medical and mental health specialty sectors in the expenditure and treatment patterns of aged and disabled Medicare beneficiaries with a physician diagnosis of psychiatric disorder. Outcomes included the number of psychiatric services received, psychiatric and total Medicare expenditure, the type of services received, whether or not the patient was hospitalized for a psychiatric disorder, and the length of the psychiatric care episode. Findings indicate that compared to beneficiaries treated only in the general medical sector, those seen by a mental health specialist had longer episodes of care, were more likely to receive services specific to psychiatry, and had greater psychiatric and total expenditure. Only weak evidence was found of differences in psychiatric hospitalization rates between the general medical and the mental health specialist sector. Ettner et al. concluded that mental health care provided to Medicare beneficiaries in the general medical sector does not appear to be a perfect substitute for care provided in the specialty sector.

Although many health plans view gatekeeping as an essential tool for controlling costs and coordinating care, many patients and physicians object to it. Subsequently, many managed-care companies in the United States have relaxed the requirements for access to specialty services or have abandoned gatekeeping altogether. Ferris et al. (2001) report on the experience of Harvard Vanguard Medical Associates, a multispecialty prepaid group practice, after it eliminated a gatekeeping system that had been in place for more than 25 years. In randomly selected cohorts of 10,000 members each, the study analysed visits during 6-month periods for 3 years before and 18 months after the elimination of the requirement that referrals for specialty care must be obtained from primary care physicians. During the 18

months after gatekeeping had been eliminated, there was little evidence of any change in the use of specialty services by adults.

Based on our data as well as similar data, the gate keeper system seems to be an effective remedy against the over-utilization of the ambulatory health care system (von Stillfried and Arnold 1993), doctor hopping and doctor shopping, consumerism (Lupton 1997), and finally the medicalization of daily hazards within the society (Trethowan 1975; von Ferber 1988). Our data support the conclusion that family physicians in a gate keeper system actually function as gate keepers by reducing the number of contacts to other physicians and the intensity of treatment. However, our data also indicate that family physicians do not help reduce hospital admission rates, as, in the present study, there were more hospital admissions in the Netherlands than in Germany. Although having shown that gate keepers hinder patients from seeing specialists from the beginning, the question whether or not this means inadequate care still remains unanswered. What should be the advantage of not directly consulting a gynaecologist for bleeding irregularities, an ear-nose-throat specialist for hearing problems, or a psychiatrist for mental problems? Are general practitioners always the best professionals to refer to as initial health care providers? This study cannot answer these questions and it cannot decide whether a society accepts paternalistic health care systems in which physicians decide what type of care a patient gets or whether a society prefers an open access system where there is much more control in the patient's own hands, and where physicians are forced to be more client-oriented as can be concluded from the higher treatment intensity in Germany. These questions show that decisions on health care are not only the result of medical necessities alone, but are also influenced by ethical, political, and financial considerations.

There is a continuing need for good quality research evaluating different ways of organizing access to ambulatory health care that could be used to inform policy makers, in particular examining whether patients treated by health care professionals with expertise and interest in the mental health care sector will experience better outcomes (Eastwood and Sheldon 1996). If specialist contacts substitute for general practitioner contacts, the observed health care patterns mean that certain groups of patients prefer to use a relatively expensive service for problems for which an equivalent but less costly alternative is available. Subsequently, health care expenses are higher than need be (Bongers et al. 1997). If specialist contacts do not, or only partially, substitute for general practitioner contacts, some patients may not see a specialist when this is required. This implies inadequate treatment or even mistreatment, possibly resulting in higher consecutive costs. Other patients, who do not consult a general practitioner first, may find the 'right' specialist for a special problem only after having consulted numerous physicians, forcing up health care expenses in this way.

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